Title: ENERGY DELIVERY OPTIMIZATION FOR RF DUTY CYCLE FOR LESION CREATION

IN THE CLAIMS

Please amend the claims as follows:

1-15. (Cancelled)

- 16. (Previously Presented) A system for delivering RF energy to an endocardial tissue, the system comprising:
- a catheter having one or more electrodes proximate a distal end of the catheter, the catheter configured for being positioned such that the one or more electrodes are adjacent the endocardial tissue, at least one of the electrodes including a tip electrode having a thermal time constant of approximately 240 ms; and
- a power control system configured to provide power to the tip electrode, the power having a plurality of alternating on portions and off portions, one set of adjacent on and off portions defining a duty cycle;
- wherein the power control system delivers an energy pulse of between approximately 0.01 ms to 4 ms via the tip electrode, and the on portions and off portions of the duty cycle have a ratio of between 50% 100%.
- 17. (Previously Presented) The system of claim 16, wherein the duty cycle chosen ranges from 80% to 100%.
- 18. (Currently Amended) The system of claim 16, wherein the platinum tip electrode includes an approximately 5 mm tip with a diameter of approximately .094 inches.
- 19. (Previously Presented) The system of claim 16, wherein the RF energy has a period of between 120 ms and 240 ms.
- 20. (Previously Presented) The system of claim 16, wherein the RF energy has a period of greater than 240 ms.

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- 21. (Currently Amended) The system of claim 16, wherein the duty-eyele ranges from 80% to 100% the power control system delivers the energy pulse having an effective peak power of 150 W.
- 22. (Original) The system of claim 16, wherein one of the one or more electrodes includes a ring electrode.
- 23-28. (Cancelled)